INSTRVCTIons for the increasing of Mulberie Trees, and the breeding of Silke-wormes, for the making of Silke in this Kingdome.

Whereunto is annexed his Maieſties Letters to the Lords Lieſetenants of the ſeuerall Shieres of England, tending to that purpoſe.

LONDON
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1609

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To the Reader.

AS one desirous of nothing more then the publike good, I here most willingly impart vnto thee (Gentle Reader) that which by my own experience I finde in regard of the benefit it affoords, worthy thy paines and obseruatiõ. It hath pleasedhis Maiestie out of his deepe discerning iudgemẽt, to giue my purpose a special approbatiõ & withal to expresse a willingnesse in himselfe to further so good a businesse as by his gratious Letters hereunto annexed most manifestly appeares. Accept therefore of these my briefe directions, & approoue of them as they prooue: I could haue extended them to a farther length; but Oratorie needs not where the thing it selfe perswades: Yet some peraduenture that haue laboured in the like before, will take occasion to countenance themselues & make my breuitie an argument of vnsufficiency, although I hope they will consider that a Kings Picture may bee as perfect in a penny as in the largest coine.

And what soeuer hath beene by them published, interpreting other mens workes, according to the practise thereof in Forraigne parts, where the same as yet is generally better vnderstood, I doubt not but future tryall will verifie this my booke to be euerie way heere more correspondent to the creature whereof it treates: and for such I commend it to each vnpartiall vnderstanding. Remaining alwaies,

Thine for the publike Weale:

W. S

Iames Rex.

Right truſtie and VVelbelooued wee greete you well.

IT is a principall part of that Chriſtian care which appertaineth to ſoueraigntie, to endeauour by all meanes poſsible, aſwell to beget as to increaſe among their people the knowledge and practiſe of all Artes and Trades, whereby they may be both wained from idleneſſe & the enormities therof, which are infinite, and exerciſed in ſuch induſtries and labours, as are accompained with euident hopes, not onely of preſeruing people from the ſhame and greeſe of penurie, but alſo of rayſing and increaſing them in wealth and aboundance, The ſcope which euerie freeborne ſpirit aymeth at, not in regard of himſelfe onely and the eaſe which a plentiful eſtate bringeth to euerie one in his particuler, but alſo in regard of the honor of their natiue country, whoſe com-

commendations is no waie more set foorth then in the peoples actiuenes and industrie. The consideration whereof hauing of late occupied our minde, who alwaies esteeme our peoples good our necessarie contemplations, we haue cõceiued as well by the discourse of our owne reason, as by information, gathered from others, that the making of silke might as well be effected heere as it is in the kingdome of France, where the same hath of late yeares beene put in practise: For neither is the clymate of this Ile so far distinct or different in condition from that countrie, especially frõ the hither parts therof, but that it is to be hoped that those things which by industry prosper there, may by like industrie vsed heere haue like successe: and many priuate persons who for their pleasure haue bred of those wormes, haue found no experience to the contrarie, but that they may be nourished and maintained heere if prouision were made for planting of Mulberie trees, whose leaues are the food of the Wormes. And therefore wee haue thought good hereby to let you vnderstand, that although in suffering this inuention to take place, we doe shew our selues somewhat an aduersary to our profit, which in the matter of our Customes for silk brought from beyond the Seas, will receiue some deminution: Neuertheless, when there is question of so great and publique vtilitie to come to our kingdome

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and ſubiects in generall, and whereby (beſides multitudes of people of both ſexes and all ages) ſuch as in regard of impotencie are vnfitte for other labour, may bee ſet on worke, comforted and releeued; We are content that our priuate benefit ſhall giue way to the publique, and therefore beeing perſwaded that no well affected Subiect will refuſe to put his helping hand to ſuch a work as can haue no other priuate end in vs, but the deſire of the wel-fare of our people, we haue thought good in this forme onely to require you (as a perſon of greateſt authoritie within that Countie) and from whome the generalitie may receiue notice of our pleaſure (with more conueniencie then otherwiſe) to take occaſion either at the quarter Seſsions, or at ſome other publique place of meeting, to perſwade and require ſuch as are of abilitie (without diſcending to trouble the poore, for whome we ſeeke to prouide) to buye and diſtribute in that Countie, the number of ten thouſand Mulberie plants, which ſhal be deliuered vnto them at our Cittie of &c, at the rate of three farthinges the Plant; or at ſixe ſhillings the hundred, containing fiue-ſcore plants. And becauſe the buying of the ſaid Plants at this rate, may at firſt ſeeme chargeable to our ſaid ſubjects, (whome we would bee loath to burthen) wee haue taken order, that in March or Aprill next, there ſhall be deliuered at

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the ſaide place a good quantitie of Muſberie-ſeedes, there to be ſold to ſuch as will buy them, By meanes whereof the ſaid plants will bee deliuered at a ſmaller rate then they can be afforded being caried from hence: hauing reſolued alſo in the meane time that there ſhall bee publiſhed in print a plaine Inſtruction and direction, both for the encreaſing of the ſaide Mulberie-trees, the breeding of the Silke-worms, & all other thinges needefull to be vnderſtood, for the perfecting of a work euery way ſo cõmendable & profitable as wel to the planter as to thoſe that ſhal vſe the trade; Hauing now made knowne vnto you the motiues as they ſtãd, with the publik good, wherin euerie man is intereſſed, becauſe wee knowe how much the example of our owne Deputie-Leiuetenants and Iuſtices, wil further this cauſe, if you and other your neighbours wil be content to take ſome good quãtities hereof, to diſtribute vpon your owne landes: wee are content to acknowledge thus much more in this direction of ours, that all thinges of this nature tending to plantations, increaſe of Science, and works of induſtrie, are thinges ſo naturally pleaſing to our owne diſpoſition, as wee ſhall take it for an argument of extraordinarie affection towards our perſon, beſides, the iudgement we ſhall make of the good diſpoſitions in all thoſe that ſhall expreſſe in any kinde their ready mindes, to further

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the ſame, And ſhal eſteeme that in furthering the ſame, they ſeeke to further our honour and contentment, who hauing ſeene in few yeares ſpace paſt, that our Brother the French King hath ſince his comming to that Crowne, both begun and brought to perfection the making of Silkes in his countrie, whereby he hath wonne to himſelf honour, and to his ſubiects a meruailous increaſe of wealth, would account it no little happines to vs, if the ſame worke which wee begun among our people with no leſſe zeale to their good (then any Prince can haue to the good of theirs) might in our time produce the fruits which there it hath done; wherof we nothing doubt if ours will be found as tractable and apt to further their owne good, now the way is ſhewed them by vs their Soueraigne, As theſe of France haue bene to conforme themſelues to the directions of their King. Giuen vnder our Signet at our Pallace of Weſtminſter, the Sixteenth of Nouember, in the ſixt yeare of England, France and Ireland, and of Scotland the two & fortieth.

INSTRUCTIONS
For the increaſe and planting of Mulberie Trees.

VVhat ground is fit for the Mulberie ſeedes, *how the ſame is to be ordered, & in what ſort the ſeedes are to be ſowed therein.*

THE ground which ought to be appointed for this purpoſe, beſides the naturall goodneſſe of it, muſt be reaſonably well dunged, and withall ſo ſcituated, as that the heate of the ſunne may cheriſh it, and the nipping blaſtes of either the North winde or the Eaſt, may not annoy it: the choice thereof thus made, that the ſeeds may the better proſper, & come vp after they bee ſowne, you ſhal dig it two foote deepe, breaking the clods as ſmall as may be, and afterward you ſhall deuide the ſame into ſeuerall Beds of not aboue fiue foote in breadth, ſo that you ſhal not neede to indanger the plants by treading vpon them, when either you water or weede them.

The Mulberie ſeedes you ſhall lay in water for the ſpace of xxii houres, and after that you ſhall drye them againe halfe drie, or ſomewhat more, that when you ſowe them they may not cleaue together: Thus done, you muſt caſt them vppon the fore ſaide beds, not altogether ſo thicke as you vſe to doe other

garden Seedes, and then couer them with ſome fine earth (paſt thorough a Siue) about halfe an inch thicke: In drye weather you ſhall water them euerie two daies at the fartheſt, as likewiſe the Plants that ſhall come of them; and keepe them as cleane from weedes as poſſibly you can.

The time in which you ought to ſowe them for your beſt aduantage, is either in March, Aprill, or May, when froſtes are either altogether paſt, or at the leaſt not ſo ſharpe, or of ſo long continuance, as to indanger their vpſpring.

There is yet another way to ſowe them, and that is as followeth: you ſhall (being directed by a ſtraite line) make certaine furrowes in the beds aboue mencioned of ſome foure fingers deepe, and about a foot in diſtance the one from the other: After this, you ſhall open the earth with your hands, on either ſide of the aforeſaid Furrowes, ſome two fingers from the bottome, and where you haue ſo opened it, ſhall you ſowe your ſeedes; and then couer them halfe a finger thicke with the earth which before you opened.

When

VVhen the Plants that are ſprung vp of the ſeeds, are to bee remooued, and how they are to be planted the firſt time.

IN the monethes of September, October, Nouember, December, March or Aprill, the next yeare after the ſeedes are ſowne, you may remooue their plants, (or in the month of Ianuarie, if it bee not in froſtie weather) and ſet them in the like beds as before, and about one foote the one from the other, but firſt you muſt cut off their rootes about 8. inches in length, and their tops about halfe a foote aboue their roots, more or leſſe, according to the ſtrength of the ſaide plants, for the weaker they be the leſſe tops you ſhal leaue them. In this ſort you may ſuffer them to remaine (weeding and watering them as neede ſhall require) till they bee growne ſixe foote in length aboue their roots, whereunto when once they haue attained, you may cut their tops, and ſuffer them to ſpread, alwaies hauing a care to take away the many branches or ſuccours, that may any way hinder their growth, vntil they be come to their full length of ſixe foot, as aforeſaid.

VVhen, and how the Plants are to be remooued the ſecond time, and in what manner they are to bee planted where they ſhall remaine.

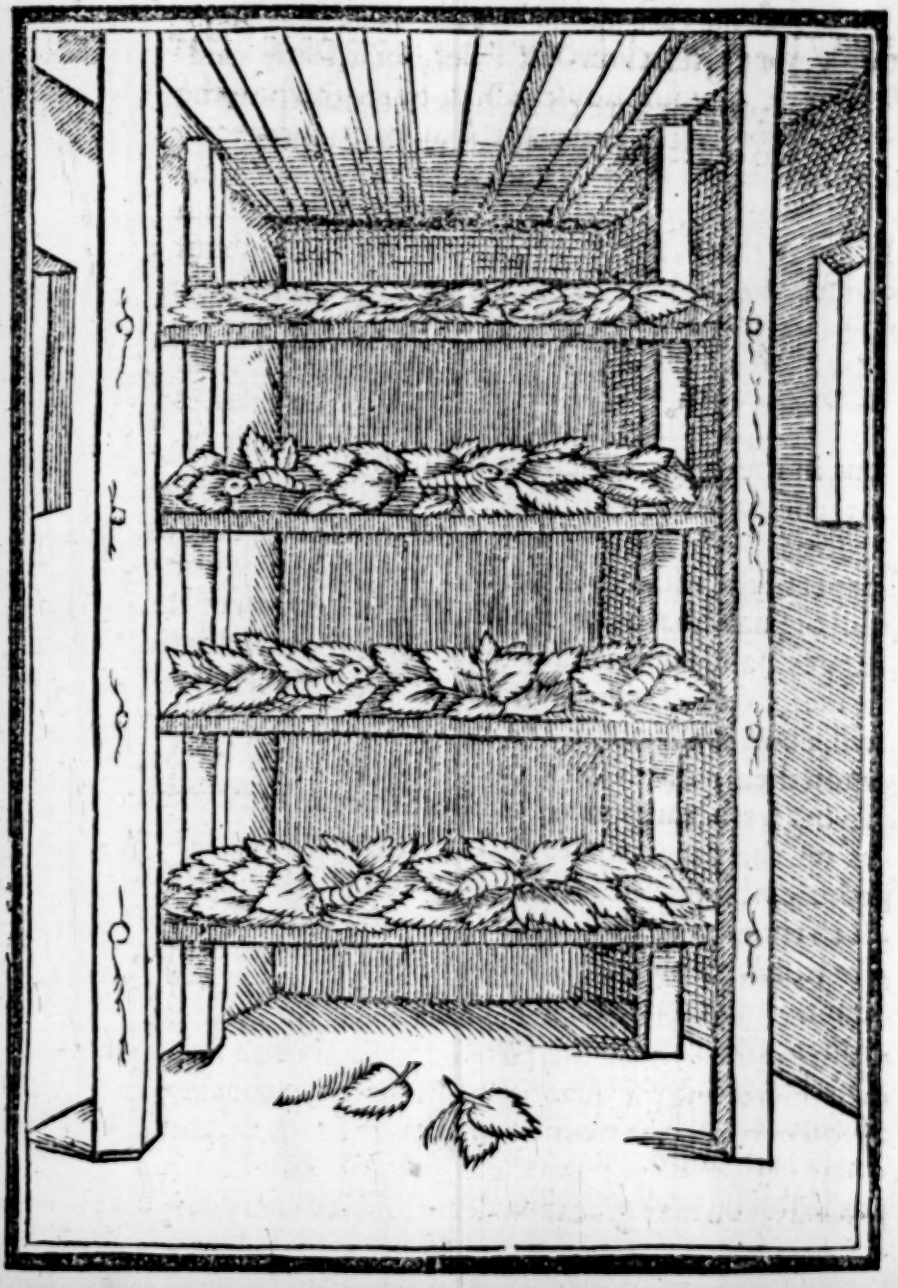
IN the Monethes aforeſaid, (according as your plants are waxen ſtrong,) you may remoue them either into the hedges of your fields, or into any other grouds. If in hedges, you muſt ſet them ſixeteene foote the one from the other, if in other grounde, intending to make a wood of them eighteene foote at the leaſt. But a month before you doe remooue them, you muſt make the holes (wherein you purpoſe to ſet thē) about foure foot in breadth, and ſo deep as that their rootes may bee well couered, and ſome halfe a foote of looſe earth left vnder them, hauing alwaies a ſpeciall care ſo to place them, that they may receiue the benefit of the Sunne, and not to be ſhadowed or ouer-ſpred by any neighbouring trees.

When

VVhen, and how the egges of the Silke-wormes are to be hatched, and how to order the Wormes that shall come of them.

VVHen the leaues of Mulberie trees begin a little to bud foorth, take the Egges of your Silke-wormes, and lay them in a peece of Say, or such like stuffe, and in the day time carie them in some warme place about you, in a little safe Boxe, but in the night either lay them in your bed or betweene two warme pillowes, vntill such time as the wormes begin to come foorth: then take a peece of paper of the widenes of the said boxe, & hauing cut it full of small hoales, lay it within the same vppon the Egges, and vppon that againe some fewe Mulberie leaues, to which the Wormes as they are hatched, will continually come. These leaues with the wormes vpon them, you must still remoone into other boxes, laying fresh leaues aswel on those that are remooued as on the paper where the Egges are; and this is the course which must be duely kept and obserued, vntill such times as all the wormes be come foorth of their shels, still keeping their boxes warme: as aforesaide, but no longer about you, but vntill the wormes begin to come forthout of which boxes you may safely take them, when once they haue past their second sickneſſe, and feede them vpon shelues of two foote in bredth, and eighteene inches one aboue the other, as in this figure following is expressed.

The



The ſaid ſhelues are not to be placed in any ground-roome, nor yet next vnto the Tyles, but in ſome middle roome of your houſe which openeth vpon the North & ſouth, that you may the more conueniently giue them either heate or ayre, according as the time & ſeaſō ſhal require. Beſides, you muſt not make them cloſe vnto the Walles but ſo as you may paſſe about them, the better to looke vnto the Wormes, & keepe them from Rats & Mice, which otherwiſe might deuoure them. You muſt obſerue the times of their comming foorth, and keepe euerie one or two daies hatching by themſelues, that you may the better vnderſtand their ſeuerall ſickneſſes or ſleepings, which are foure in the time of their feeding. The firſt commonly ſome twelue daies after they are hatched, and from that time at the end of euerie eight daies, according to the weather and their good or ill vſage: during which time of euery ſickneſſe, which laſteth two or three daies, you muſt feede them but verie little, as onely to releeue ſuch of them, as ſhall haue paſt their ſickneſſe before the reſt, and thoſe that ſhall not fall into their ſickneſſe ſo ſoone.

The whole time that the wormes doe feede, is about nine weekes, whereof vntill they come vnto their firſt ſickenes, giue them young Mulberie leaues twice euerie day, but few at a time; from thence vntil their ſecond ſickneſſe, twice euerye day in greater quantity; and ſo from their ſecond to their third ſickneſſe, increaſing the quantity of the leaues, according as you perceiue the wormes to grow in ſtrength, and cleare of ſickneſſe: from the third vntill their fourth ſickneſſe, you may giue them leaues thrice euery day,

and the fourth being past, you may let them haue so many as they will eate, alwaies hauing a care that you giue them none, but such as are drie, and well ayred vpon a Table or cloath, before they be laid vpon them, and withal gathered so neere as may be, at such times as either the sunne or winde hath cleared them of the deaw that falleth vpon them.

For the feeding of Wormes you neede obserue no other order then this, lay the Mulberie leaues vppon them, and euerie two or three daies remooue them, and make cleane their boxes, or shelues, vnlesse in times of their sickenesse, for then they are not to bee touched: the leaues which you take from them when you giue thē fresh to feed vpon, you must lay in some conuenient place, and vpon them a few new leaues, to which the wormes that lay hidden in the old, wil come, & then you may passe them with the said newe leaues to the rest of the wormes: And now least anye thing should bee omitted, which serues to perfect the discouery of so excellent a benefit, I will aduise you to bee very diligent in keeping cleane their Boxes, or Shelues, as being a speciall meanes whereby to preserue them; wherfore when you intend to doe it, you shall remooue them together with the vppermoste leaues wheron they lye, vnto other boxes or shelues, for with your hāds you may not touch them, till they haue throughly vnder-gone their third sickenesse, and then may you passe them gently with cleane handes, without doing them any harme: prouided that the partie that commeth neare them smel not of garlick, onyons or the like. The first fiue weekes of their age you must be very carefull to keepe them warme, and

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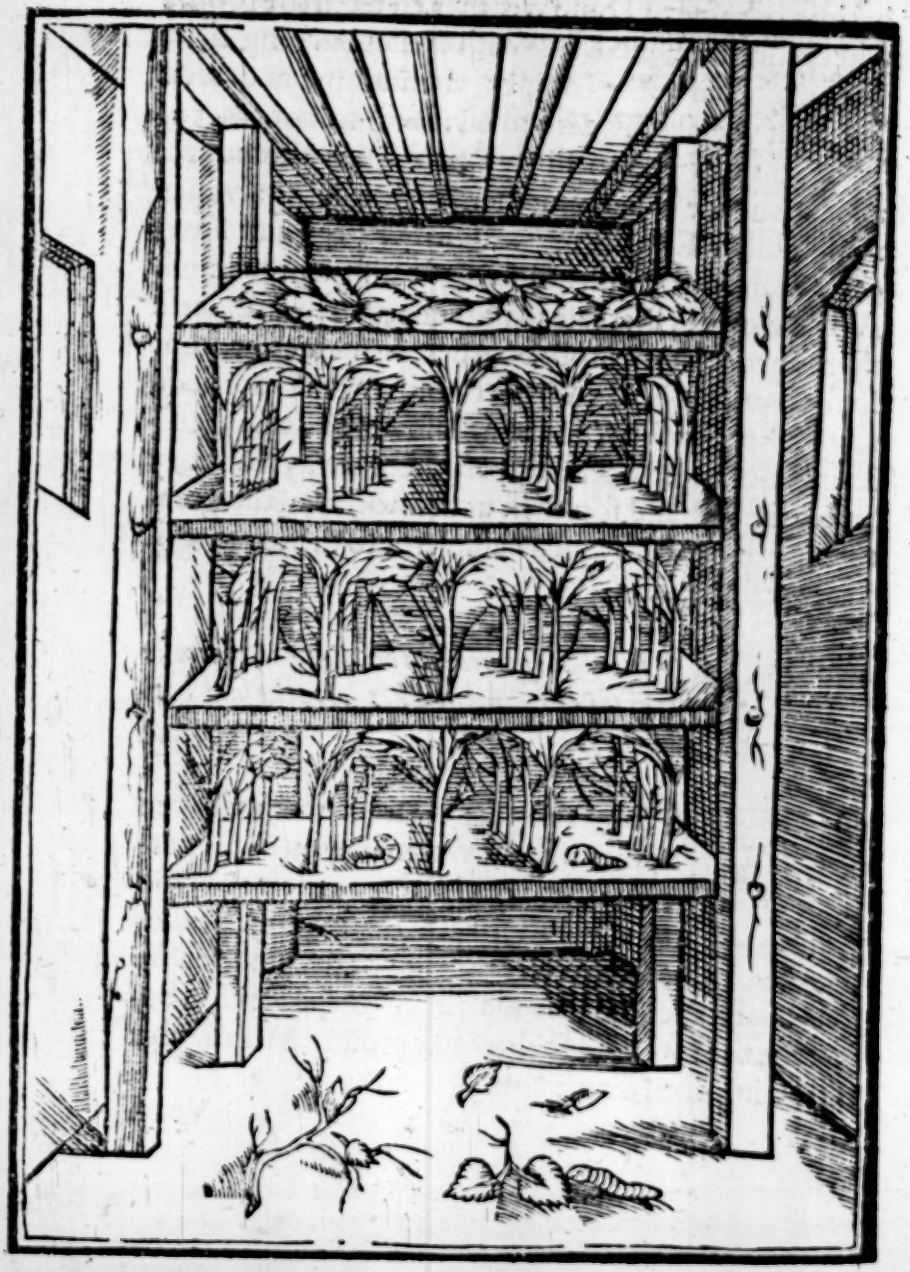
in time of raine or could weather, to ſet in the roome where they remaine, a pan with coales burning in it, now and then ſome Iuniper, Beniamin, and ſuch like, that yeeldeth ſweete ſmels. But afterwards, vnleſſe in time of extraordinary cold, giue them ayre, and take heede of keeping them to hot, being alwaies mindefull to ſtore the roome with hearbes and flowers which are delightfull and pleaſing to the ſmell. As the wormes increaſe in bigneſſe, you ſhal diſperſe them abroad vpon more boardes, or ſhelues, and not ſuffer them to lie too thicke together, & if you finde any of them broken, or of a yellowe gliſtering colour inclining to ſickneſſe, caſt them away leaſt they infect the reſt, and ſort ſuch as are not ſicke, the greateſt and ſtrongeſt by themſelues, for ſo the leſſer will proſper the better.

When, and how to make fit roomes for the Wormes to worke their bottomes of ſilke in, and in what ſorte the ſaid bottomes are to be vſed.

AS ſoon as by the cleare amber coloured bodies of your wormes, you ſhall perceiue them ready to giue their ſilk, you muſt (with heath made verie cleane, or with the branches of Roſemarie, the ſtalkes of Lauender, or ſuch like) make Arches betweene the fore-ſaid ſhelues, according as this figure following doth direct you.



Vpon the branches and ſprigs wherof, the wormes will faſten themſelues, & make their bottoms, which in foureteene daies after the worme beginneth to worke them, you may take away; and thoſe which you are minded to vſe for the beſt ſilke, you muſt either preſently winde or kil the wormes which are within them, by laying the ſaide bottoms two or three daies in the Sunne, or in ſome Ouen after the bread baked therein is taken out, and the fierceneſſe of the heat is alaide. The other bottoms which you intend to keep for ſeede, you muſt lay in ſome conuenient warme place, vntill the Wormes come forth, which is commonly ſome ſixeteene or twenty daies from the beginning of their worke: and as they doe come foorth you muſt put them together vpon ſome peece of old Say, Grogeran, the backſide of old Veluet, or the like, made faſt againſt ſome Wall or hanginges in your houſe, according as this figure following ouer the leafe, doth preſcribe.

There they will ingender, and the Male hauing ſpent himſelfe, falleth downe, and in ſhort time after dieth, as alſo doth the Female, when ſhee hath laide her Egges, Which Egges, when you perceiue them vpon the Sey or Grogrean, &c. to be of a grayiſh colour, you may take them off gentlye with a knife, and hauing put them in a peece of Sey or ſuch like, keepe them in a couered box amõgſt your wollen cloathes, or the like, till the yeare following: But not in anye moiſt room, for it is hurtfull for them, neither where there is too much heate, leaſt the wormes ſhould bee hatched before you can haue any foode for them.

The making of a Wheele, as likewiſe the way to winde the ſaide Silke from the bottomes, can hardly be ſet downe ſo plainely, as to be rightly vnderſtood: Wherefore when time ſhall ſerue, there ſhall be ſent into euerie Countie of this kingdom, a Wheele ready made, and a man that ſhall inſtruct all ſuch as are deſirous to learne the vſe thereof: Till when, I will commend theſe breefe inſtructions to bee carefullye conſidered of all ſuch as are willing either to benefit themſelues or their country, that being skilful in the Contemplation, they may the readier, and with leſſe error apply themſelues to Action, which painefull induſtrie, with Gods aſſiſtance, will quickly perfect.

FINIS.

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